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ABSTRACT

Reviewed in this summary are the seven evaluations completed by the Anthropology Curriculum Project (ACP) of their own materials for grades 1-7. These seven are: 1) cognitive achievement within the premises of a single discipline approach and differential teacher preparation; 2) differential cognitive achievement by grade level holding teatment by conventional elementary methods and by programmed instruction; 4) differential cognitive achievement varying treatment by deductive and inductive methods of teaching and by relationship to teaching style as perceived by teachers and observers; 5) cognitive achievement for five-year olds using an adaptive oral unit; 6) pupil judgments of interest and suitability, and 7) processes of curriculum diffusion. The bibliography cites sources for complete descriptions of these evaluations. In addition, ED 041 813 is a related document. (Author/DJB)

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EVALUATION IN THE ANTHROPOLOGY CURRICULUM PROJECT

UNIVERSITY OF GEORGIA

by

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EVALUATION IN THE ANTHROPOLOGY CURRICULUM PROJECT

UNIVERSITY OF GEORGIA

The Anthropology Curriculum Project, University of Georgia, is a USOE funded Project Social Studies Curriculum Development Project. The five year contract period began in June 1964 and ends May 1969. During this period the major product commitment was to develop, field test, and evaluate a sequential curriculum in anthropology for the elementary grades 1-7. As of this date, the Project has field tested and evaluated five-week units for Grades 1 and 4, "The Concept of Culture;" Grades 2 and 5, "New World Prehistory" and "Old World Prehistory." It has developed but not yet tested the "Life Cycle" unit for Grade 7. It will complete by the end of the contract period the "Cultural Change" units for Grades 3 and 6, which still remain as a part of the sequential curriculum proposal.

In addition to the units for Grades 1-7 inclusive, it has developed the following materials: a programmed text in a film on "Archaeological Methodology," now being distributed by In'tl Film Assess; "Archaeological Methodology," intermediate grades; an upper intermediate or junior high unit on "Language;" a K-unit on "Concept of Culture," an adaptation of the first grade unit; two junior high units on "Political Anthropology" and "The Urban Community," in cooperation with the Atlanta and the Fulton County Public School Systems; and has initiated units on "Classical Culture," a three-title American minority ethnic series--Negro; Indian, and Spanish American; and a unit on "Race, Caste, and Prejudice." All of these units now in process will near completion by the end of May 1969. Notwithstanding the difficulties with the Grades 3 and 6 units on cultural change, the Anthropology Project will substantially exceed the product commitment by the end of the contract period. This product summary gives you some indication of the scope of the Project's activities.

Thus far seven different evaluations have been undertaken by the Anthropology Curriculum Project. These seven are: (1) Cognitive achievement within the premises of (a) a single discipline approach and (b) differential teacher preparation; (2) differential cognitive achievement by grade level holding treatment variable constant; (3) differential cognitive achievement varying treatment by (a) convential elementary methods and (b) programmed instruction; (4) differential cognitive achievement varying treatment by (a) deductive and inductive methods of teaching and (b) relationship to teaching style as perceived by teachers and observers; (5) cognitive achievement for five-year olds using an adaptive oral unit; (6) pupil judgments of interest and suitability, and (7) processes of curriculum diffusion. Two other types of evaluation are projected in Spring 1969; (1) attitudinal change resulting from instruction in anthropology and (2) the effectiveness of pre-organizers in increasing increments of learning. The remainder of this paper will consist of a precis of the evaluation studies which have been undertaken.

1. Cognitive Achievement. The original proposal envisioned one major type of evaluation: the suitability of the single discipline approach for instruction in anthropology and whether there was a significant difference in the achievement of children in anthropology taught by teachers who had specific training in anthropology as compared with teachers untrained in anthropology.

Field tests of the Grade 1, 2, 4, and 5 units indicate the following: There was a significant increase in achievement in anthropology, as measured by a conceptually organized test of anthropological content, using different forms of a pre- and post-test. The results of these tests, conducted in Spring 1965 and in Spring 1966, indicate that the single discipline approach is suitable for young learners, and that assumptions made concerning the unsuitability of teaching a structured discipline to elementary children reflect certain value premises concerning the organization of social studies material.

In this connection, it should be emphasized that the results of this type of testing do not, and can not, answer the normative question whether material ought to be organized by separate disciplines for young learners; it merely answers the question affirmatively that young children can learn by this method.

In the original two years of testing, two standardized tests were also used: the STEP social studies battery at the intermediary level for Grades 4 and 5; and the California Reading Test for Grades 2, 4, and 5. Using the STEP as a pre- and post-test, it was found that achievement in anthropology did not contribute to achievement on the STEP test. This results from the simple fact that the STEP test does not include anthropology item. Consequently, there was nothing the STEP test could measure in anthropology.

As was expected, a high score on the STEP pre-test was positively correlated with achievement in anthropology, as was a high reading score. A high verbal facility, whether measured by a direct reading test or a social studies test (another kind of reading test), is positively correlated with achievement in anthropology, while such factors as race and sex are not positively correlated with achievement in anthropology.

Superficially, race appears to be correlated with achievement in anthropology, but inspection of reading performance of white and Negro children in the experimental sample shows that Negro children as a group are more disadvantaged readers than are white children. Where Negro children exceed white children in reading ability, they exceed white children in anthropology. We, therefore, do not consider race as a significant variable in learning anthropology, a finding consistent with all other studies which go behind race designation and ascertain actual reading ability and school achievement of Negro students.

The second question in this initial testing cycle related to the achievement of pupils taught by elementary teachers who had no special training in anthropology, as compared with elementary teachers who received an intensive six week course in regular college anthropology, the equivalent of ten quarter hours credit. It was found that children taught by the experimental teachers who attended the institute did not perform significantly higher than children taught by teachers who did not have the special training in anthropology.

In interpreting these results of the contribution of teacher training in anthropology to pupil achievement, it is important to bear in mind that the measures used were pupil tests, not tests of teacher knowledge of anthropology. These findings do not lead to the conclusion that teachers who

attended the anthropology institute did not know any more about anthropology than the control teachers. In fact, on this point the Project does not know the differences between the knowledge of anthropology of experimental as compared with control teachers. This was not the purpose of the evaluation, which was pupil achievement oriented. As a matter of policy, it was decided that in a repetitive curriculum development project it was not judicious to test teachers, for reasons of project management and long term teacher participation.

Empirical observation of teacher behavior and feedback from principals and supervisors tends to indicate that those teachers who were judged as effective elementary teachers were likewise effective in teaching the anthropology units, with or without training in anthropology. On the other hand, teachers who were generally designated as ineffective were likewise ineffective in teaching anthropology. The mere addition of knowledge about anthropology did not result in greater teacher effectiveness as measured by pupil achievement.

While this teacher training, from the standpoint of the project it indicated that the materials developed by the project were useable by regular teachers who had no special training. One of the fundamental premises of the project is that innovative materials ought to be useable by regular teachers without special training. Pupil achievement together with positive teacher feedback from untrained as well as trained teachers indicates that the project materials are useful for classroom instruction.

In this connection, it is important to emphasize that teachers designated as experimentals and controls were not specially selected teachers. In training they ranged from the emergency, non-degree certificate level to sixth year for both experimentals and controls. Some were outstanding teachers, others mediocre. All were Georgia teachers in predominantly rural schools. If children and teachers on the lower end of the aptitude scale can use our anthropology materials, we reasoned that teachers and pupils from more advantaged school districts could perform even at a higher level. Experience has borne this assumption out. An example is the Spring Mill Elementary School in Montgomery County Maryland, which as a demonstration school using Georgia materials in connection with the 1968 meeting of NCSS.

2. Differential cognitive achievement by grade level holding treatment constant. The writing of knowledge oriented material for young learners, organized and presented as a science, imposes a different problem from the writing of social science material about the home, school, and community which utilize basic reader vocabulary. To teach accurately any field of knowledge requires the use of the organizing and synthesizing concepts of the discipline.

A decision was made, therefore, not to be limited by conventional reading formulas but to use the scientific terminology of anthropology. While an attempt was made to reduce the concept load in anthropology, technical explanation in anthropology brought about an increase in the level of general language used. The first unit written as a pupil text was the fourth grade unit "Concept of Culture." Even as we were going to

press with the unit, before it was ever field tested, we were cognizant of the fact that the concept load was much too high, particularly in view of the reduction of explanatory and repetitive material needed to fix the concepts.

To study the suitability of material by grade level and to ascertain differences in achievement by pupils at grade levels 4, 5, and 6. Potterfield, a trained teacher, taught one experimental class at each grade level, and a teacher untrained in anthropology also taught one control class at each grade level. The pertinent finding here is that grade level is not nearly as significant in leanring the unit as was originally hypothesized. While fifth and sixth grade children tended to score higher before and after instruction than did the fourth grade children, the main effect of grade was not significant.

Now why is this? Why is it that very difficult material can be used over a span of several grades, with no major differences in learning resulting which can be attributed to grade level?

A replication of the Potterfield study has not been undertaken. However, this study, together with observational feedback, seems to indicate that a three-year age span is not sufficient to differentiate in facility for language learning, where the new learning task is so specific that there is no opportunity for recall or transfer of previous learning. By the time children attain the fourth grade, they have acquired a facility for new concept learning and the two-year span to the sixth grade is not sufficiently great to differentiate in rate at which new language is learned. Hence measurement of anthropological achievement will not be significantly greater by grade level, even though older children will have a slight advantage. It would, therefore, seem that the presentation of new science and a new body of knowledge need not be as concerned with reading level as much as is sometimes indicated.

Now please note: we are not saying that there should be no control over content. What we are saying is that the great concern we have shown with content level may not be justified. After all, remember that in the typical classroom we do not expect the pupil to merely read. At any grade level, there is a great deal of oral instruction, even without the formalities of a lecture. The pupil is not expected to get all of his information by independent reading. Neither are college students, for that matter, who in most institutions follow just as rigid a regimen of oral language reinforcement as does the elementary child.

3. Programmed instruction. To ascertain differences in achievement in anthropology taught by conventional methods and programmed instruction, Thomas developed a programmed unit in archaeological methods paralleling the content of the narrative chapter in the fifth grade unit "Old World Prehistory." Instead of using the regular fifth grade pre- and post-tests, because they contained only a small number of items drawn from the chapter on archaeological methods, a special 50-item pre- and post-test was constructed. A control group of 144 fifth grade students were taught by conventional methods, and an experimental group of 176 students were taught by the programmed text. No significant differences between the treatment groups were found on the California Reading Test or the Anthropology pre-test. Because of the relationship of reading to anthropology achievement, experimental and control students were assigned to three reading levels as follows: fourth grade and below, fourth through sixth, and

seventh through eighth.

The post test results indicated that there was no significant difference in achievement in anthropology of students taught by the programmed text and those taught by conventional methods. However, the time assigned to conventional instruction was 180 minutes; The average time to complete the programmed text was 91 minutes with a standard deviation of 27 minutes. From the standpoint of economy in time, it therefore appears that programmed instruction in anthropology, as far as can be measured by a paper and pencil test, is an efficient way of teaching. The so-called reinforcing activities of conventional instruction apparently do not add increments to learning which are susceptible to measurement by usual paper and pencil procedures.

An analysis of results indicated that scores of students conventionally taught were more homogeneous than the scores of experimental students. Regular classroom instruction thus appears to hold back the very able students and to bring up the bottom students. As was anticipated, the better the reading level, the better the performance of both experimental and control groups. A surprising finding, however, is that poor readers are no more disadvantaged using a programmed text than they are in regular instruction. Using reading scores as a criterion score, poor readers perform just as well using the programmed text, which is entirely dependent on written material with no oral teaching involved, as they do when they were exposed to conventional classroom teaching.

4. Cognitive achievement by deductive and inductive methods of teaching. Myers conducted a study which involved the preparation of anthropology materials inductively organized, and the comparison of pupil achievement taught by control and freedom oriented teachers as measured by Runner Studies of Attitude Patterns, Interview Form III. The results of his investigation, because of difficulties in maintaining observational control both in Georgia and out-of-state classes, may not be regarded as definitive. However, his study indicates the following:

1. There was no significant difference between the achievement of classes who used the new inductive as compared with the regular Anthropology Project deductive materials.

2. There was no significant difference between the achievement of pupils whose teachers were control-oriented and those who were most freedom oriented. The five most control oriented teachers had pupil achievements excelling the five most freedom oriented teachers. However, this is probably an artifact of the measurement instrument used, that is, the regular knowledge oriented test developed by the Anthropology Curriculum Project.

3. There was no significant difference between the achievement of pupils whose teachers performed compatible roles as compared with those who did not perform compatible roles, i.e., control-inductive did not contribute to better performance than control-deductive nor freedom-deductive show any superiority over freedom-inductive.

The major contribution of Myers' study is to demonstrate the real difficulty in holding constant either a methodology of organization of material or a methodology of teaching. Notwithstanding distinctions based on deductive-inductive strategies, it is apparent that most teachers use a variety of teaching methods, and that the actual method at a given time depends upon the learning task and pupil-teacher and pupil-pupil interaction at a given time. The study does not indicate any superiority in methodology or teacher orientation, notwithstanding the fact that, given the knowledge oriented nature of the Anthropology Project material, pupils taught by Project procedures show up somewhat more favorably on Project tests. In this respect it is important to emphasize that where a particular instrument has been developed, as the tests of the Anthropology Curriculum Project, to measure particular outcomes, these tests are not suitable as measures for a different product, such as divergent thinking.

5. An adaptive unit "Concept of Culture" for Kindergarten. Blackwood and Hunt have adapted the Grade 1 unit "Concept of Culture" to the Kindergarten level. It differs primarily from the Grade 1 unit in consisting of a series of daily oral lesson plans, prepared in the form of a script which the teacher may modify as needed. The test used to measure achievement was the regular first grade Anthropology Curriculum Project Test. This study therefore is in many ways akin to the Potterfield Study. Pre-primary subjects included 200 children, about half of whom were disadvantaged children in a Title I kindergarten; other children came from conventional middle class backgrounds.

As in other studies, no difference in achievement is found between sex, chronological age, and socio-economic status. There is, however, a significant correlation of anthropology achievement with Stanford Binet intelligence test scores and Metropolitan Achievement Test scores.

Significant gains at the 101 level were made by pre-primary children as a result of instruction in anthropology, after correction for guessing errors. The Hunt study, like that of Potterfield, indicates that material in the Anthropology Curriculum Project can be taught at different levels. It also indicates, along with other studies, that pre-primary children ages 4-6 can handle sophisticated concepts presented from the discipline of anthropology.

Miss Hunt in her work for the first time used a control group which did not have teaching in anthropology. In most of our studies, we have never used such a control group, for the simple reason that if children are not taught "X" it is not expected that they should learn "X." They may be learning "Y", which is just as important, but a test which has content validity for "X" treatment does not necessarily have any relevance whatsoever to "Y" treatment. It is our judgement that the inclusion of control groups who do not get the treatment is uniformly self-prophesying; they will always be behind the achievement of children in the experimental group getting the special content and teaching. There seems to be little need for such control evidence; it merely takes up the time of the control pupils and the control teacher, and leads to negative teacher reaction about research.

6. Pupil perceptions of the Anthropology Material. Pupil responses to an open-ended questionnaire, which gave fourth and fifth graders an opportunity to respond negatively or positively to instruction in anthropology, indicated a preponderance of positive to negative reactions. Part of this, of course, may be attributed to the Hawthorne effect of participating in an experimental program. However, it is encouraging, at least to the Project and teachers using the materials, that elementary pupils perceive the material as more interesting than conventional social studies material. Their responses to vocabulary load is mixed· some complain about using the big words, while many say they enjoy learning these new ideas. Pupils do not report that they perceive the anthropology material any more difficult for them to learn than the regular social studies material. While not conclusive, it would appear that teacher concern about content load comes about from the insecurity of teachers who do not know anthropology more than it does from pupil's reactions to the conceptual load.

7. Diffusion of Anthropology Project Material. Richburg, Administrative Assistant in the Project, has undertaken a study of the diffusion of anthropology material. The object of the study is to ascertain the process of diffusion which accompany the introduction of new materials into a school system. To collect data, an open-ended questionnaire was devised and sent to 70 school systems who purchased material for classroom use and the 600 individuals who have purchased sample sets. Preliminary analysis of data indicate the following:

1. Interest in the Anthropology Curriculum Project materials did not stem from any particular interest in anthropology as such, but came about as a desire to revise the social studies program, K-12. This perception is true of school administrators and social studies supervisors, teachers, and college professors.

2. The social studies consultant or a curriculum committee in a school system are the principal change agents, rather than the superintendent or principal. This finding, however, depends upon the autonomy given to the social studies consultant within a particular school system.

3. The single discipline approach of the Anthropology Curriculum Project is not a significant factor in gaining acceptance.

4. Familiarity with, and use of materials, increases the acceptance of the materials. Responses of schools using materials is more favorable than respondents who merely ordered sample sets. This is particularly true with respect to the vocabulary level. This finding is consistent with teacher feedback from Georgia experimental schools--high initial teacher resistance before instruction to vocabulary level, and increasing acceptance of vocabulary level when they find that pupils actually are able to handle the concepts.

5. Schools ordering the material are suburban rather than inner-city or rural schools. Socio-economic analysis is not yet complete, but it would appear that schools using the material are situated in rather well-to-do or at least average and up areas. Over three-fourths of the schools using the material purchased Anthropology material from regular school funds.

6. A desire to use the schools as a vehicle for developing cultural sensitivity or awareness in children is a reason for selecting the anthropology project material.

It is planned to convert the open-ended questionnaire into a forced-item response questionnaire, to reduce the amount of time for completion and to increase response, which was at a fairly low level--about one-third replied. Considering the fact that this reached back over a period of four years and the open-ended response involved considerable respondent time initial replies were adequate. It at least serves the useful purpose of categorizing major responses to some 50 different items in such a way that the Project can develop a more useful instrument for diffusion study.

In the short amount of time allotted, it has not been possible to discuss the design, methodology, limitations, and results of each study. This paper will be available in mimeographed form from the Anthropology Curriculum Project in our General Information Series. Individuals wishing to find more detailed information may consult the published articles or request on University Library Loan the unpublished dissertations listed in the bibliography.

BIBLIOGRAPHY

Greene, William W., Jr., "Anthropological Teaching in the First and Fourth Grades: A Comparison of Trained and Non-Trained Teachers as Measured by Pupil Test Performance." 99 pp. and Appendices. Athens, Georgia, February 1966. Unpublished doctoral dissertation.

Greene, William W., Jr., "Evaluation of the Anthropology Curriculum Project For Grades One and Four as Measured by Selected and Prepared Testing Instruments," in A Panel Report on the Anthropology Curriculum Project (Elementary), University of Georgia. General Information Series No. 4, Anthropology Curriculum Project, November 1965, pp. 13-15.

Wash, James A., "An Evaluation of Pupil Achievment in Anthropology," in Teaching Anthropology in the Elementary School, General Information Series No. 5, Anthropology Curriculum Project, University of Georgia, February 1967, pp. 1-25.

Potterfield, James E., "An Analysis of Elementary School Children's Ability to Learn Anthropological Content at Grades Four, Five, and Six." Athens, Georgia, June 1966. 88 pp. and Appendices. Unpublished doctoral dissertation.

Potterfield, James E., "An Analysis of Elementary Children's Ability to Learn Anthropology at Grades Four, Five, and Six. Journal of Educational Research, March 1968, pp. 297-299.

Thomas, Georgelle, "The Use of Programmed Instruction for Teaching Anthropology in the Fifth Grade," University of Georgia, Athens, Georgia, 1967. Unpublished doctoral dissertation. 74 pp. and Appendices.

Thomas, Georgelle, "Programmed Instruction for Teaching Anthropology in the Fifth Grade," The Journal of Experimental Education, Volume 36, No. 4, Summer 1968, pp. 88-91.

Myers, R. E., "Relationships of Teacher Orientations and Effectiveness Under Inductive and Deductive Teaching Methods." 99 pp. and appendices. University of Georgia, Athens, Georgia, August, 1968. Unpublished doctoral dissertation.

Hunt, Anne, "Anthropology Achievement in the Kindergarten." University of Georgia, Athens, Georgia, June 1969. In Preparation. Unpublished doctoral dissertation.

Kingston, Albert J. and Rice, Marion J., "Pupil perceptions of Anthropology Material, Grades 4 and 5." Unpublished manuscript, Anthropology Curriculum Project, with tables. June 1967.

Richburg, James R. "Diffusion of Anthropology Curriculum Project Materials." University of Georgia, Athens, Georgia, June 1969. In preparation. Unpublished Master's thesis.